AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 4, line 18, as follows:

However, in any of the foregoing various types of MR imaging that adopts the MT pulse, the wavelength of the MT pulse, that is, the duration during which the pulse lasts, is set to a longer value. The duration of the MT pulse occupies, for example, a time of no less than about 35 percents within a single repetition time TR. This longer-duration MT pulse has long been used on the basis of the historical recognition that a shorter-duration MT pulse, that is, its waveform area is insufficient, will limit the MT effects to its lower level.

Please amend the paragraph beginning at page 4, line 27 as follows:

Thus, to obtain sufficient MT effects one is obliged to make an entire scan time (resulting in an imaging time) longer. In contrast, if performing the multislice imaging is conducted with an MT pulse having a longer duration, with the scan time still unchanged, the number of slices will be reduced.

Please amend the paragraph beginning at page 6, line 4 as follows:

By way of example, the duration of the MT pulse is less than 10 ms ~~[msec]~~. Particularly, the duration of the MT pulse is 6 ms ~~[msec]~~ or less.

Please amend the paragraph beginning at page 7, line 9 as follows:

By way of example, the two types of nuclear pools consist of a nuclear pool of free water and a nuclear pool of a macromolecule. In addition, to realize the second or third object, the

echo signal from the region to be imaged may be acquired by a two-dimensional scan based on multi-slice imaging that uses an MT pulse or by a three-dimensional scan based on multi-slice imaging that uses an MT pulse. One example is that the duration of the MT pulse is less than 10 ms ~~[msec]~~.

Please amend the paragraph beginning at page 10, line 21 as follows:

The transmitting/receiving unit includes a radio-frequency (RF) coil 7 located in the vicinity of the object P in the diagnostic space inside the magnet 1, and a transmitter 8T and a receiver 8R both connected to the coil 7. Both of the transmitter 8T and the receiver 8R operate under the control of a sequencer 5 described later. The transmitter 8T supplies the RF coil 7 with an RF current pulse of a Larmor frequency, which causes a nuclear magnetic resonance (NMR). The receiver 8R receives MR signals (RF signals) via the the RF coil 7, and then carries out various kinds of signal processing with the MR signals so that digitized ~~MT~~MR data (original data) are produced.